AVAGO TECHNOLOGIES, LTD.
P.O. Box 1920
Denver, Colorado 80201-1920

ATTORNEY DOCKET NO. 10031136-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Robert A. Abraham et al.

Serial No.: 10/820,691 Examiner: GOODLEY, JAMES E.

Filing Date: April 8, 2004 Group Art Unit: 2817

Title: CIRCUIT FOR GENERATING SPREAD SPECTRUM CLOCK

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TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Sir:

Transmitted herewith is/are the following in the above-identified application:

- [x] Response/Amendment
- [ ] Petition to extend time to respond
- [ ] New fee as calculated below
- [ ] Supplemental Declaration
- [x] No additional fee (Address envelope to "Mail Stop Amendments")
- [ ] Other: (Fee $_____)

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY						
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES
TOTAL CLAIMS	20	MINUS	20	= 0	X 50	$ 0
INDEP. CLAIMS	2	MINUS	3	= 0	X 200	$ 0
☐ FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM					+ 360	$ 0
EXTENSION FEE	1ST MONTH 120.00 ☐	2ND MONTH 450.00 ☐	3RD MONTH 1020.00 ☐	4TH MONTH 1590.00 ☐		$ 0
					OTHER FEES	$ 0
					TOTAL ADDITIONAL FEE FOR THIS AMENDMENT	$ 0

Charge $ 0 to Deposit Account **50-3718**. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-3718** pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account **50-3718** under 37 CFR 1.16, 1.17, 1.19, 1.20 and 1.21. A duplicate copy of this transmittal letter is enclosed.

Respectfully submitted,
Robert A. Abraham et al.

By Eric Ho
Eric Ho
Attorney/Agent for Applicant(s)

Reg. No. 39,711

Date: March 15, 2006

Telephone No. 818-998-7220

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below:

Date of facsimile: March 15, 2006

Typed Name: Eric Ho

Signature: Eric Ho

Rev 10/04 (TransAmd)

Attorney Docket: 10031136-1

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Appl. No.	:	10/820,691
Applicant	:	Robert A. Abraham et al.
Filed	:	April 8, 2004
TC/A.U.	:	2817
Examiner	:	GOODLEY, JAMES E.
Docket No.	:	10031136-1
Confirm. No.	:	8538

MAIL STOP: NON-FEE AMENDMENTS
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AMENDMENT AND RESPONSE TO OFFICE ACTION
DATED DECEMBER 16, 2005

In response to the Office Action dated December 16, 2005, please consider the following remarks and amend the above-identified application as follows:

Amendment to the Claims/Listing of the Claims begin on page 2 of this paper.

Remarks/Arguments begin on page 8 of this paper.

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application.

Listing of the Claims:

1. (currently amended) A circuit for generating a spread spectrum clock comprising:

an output node;

a voltage controller oscillator (VCO) that includes an input coupled to a voltage control node (V_ctrl) for receiving a voltage signal and an output for generating a clock signal that has a frequency (F_out) dependent on the received voltage signal; and

a VCO input voltage modulation mechanism, coupled to the VCO input voltage node, for modulating the voltage at the VCO input voltage node to generate a spread spectrum clock; wherein the VCO input voltage modulation mechanism uses a plurality of pull-up transistors and a plurality of pull-down transistors to selectively adjust the voltage at the VCO input voltage node; and wherein the VCO input voltage modulation mechanism uses a plurality of delay cells to selectively adjust the time between a first point and a second point on a graph of the voltage at the VCO input voltage node with respect to time.

2. (original) The circuit of claim 1 wherein the VCO input voltage modulation mechanism further includes

a voltage shift-up mechanism for pulling up the voltage at the VCO input voltage node by injecting a level shifting current into the VCO input voltage node.